

CLAIMS

1. A removable gripping device (1) for a container, comprising:

- two members forming a gripper (3, 4) mounted on a gripping body (2), in which one of the members forming a gripper (4) is free to move in translation with respect to the gripping body (2), along a direction approximately parallel to the longitudinal direction of the gripping body (2) between an open position and a closed position in which the members forming a gripper (3, 4) are adapted to grip an edge of the container,

- displacement means (6) adapted to displacing the members forming a gripper (3, 4) with respect to each other, comprising a lever (7) free to move in rotation with respect to the gripping body (2) between an extended position and a retracted position in which the mobile member forming a gripper (4) is in a closed position, and a transmission means (9) extending between the lever (7) and the mobile member forming a gripper (4) adapted to displacing the mobile member forming a gripper (4) in translation when the lever (7) is pivoted, said displacement means being shaped such that the lever 7 is in a stable equilibrium position when it is in the extended position and when it is in the retracted position, and it passes through an unstable equilibrium position when it passes from one of these two stable equilibrium positions to the other, and

- locking means (33) separate from the displacement means (6), free to move between an active position and a

locked position in which they prevent the lever (7) from accidentally rotating to its unstable equilibrium position, characterized in that the locking means (33) are adapted to prevent the lever (7) from rotating to its unstable
5 equilibrium position, and comprise an activation button (20) adapted to be manipulated manually to enable the locking means (33) to move into their active position in which the lever (7) can change from its retracted position to its extended position.

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2. Removable gripping device (1) according to claim 1, characterized in that the locking means (33) are installed in translation on the gripping body (2) along a direction approximately parallel to the longitudinal direction of the
15 gripping body (2).

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3. Removable gripping device (1) according to either claim 1 or 2, characterized in that a return means (17) permanently tends to move the locking means (33) towards their locked position.

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4. Removable gripping device (1) according to one of claims 1 to 3, characterized in that the locking means (33) are closer to the members forming the gripper (3, 4) when they are in the locked position than when they are in the active
position.

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5. Removable gripping device (1) according to one of claims 1 to 4, characterized in that the locking means (33) cooperate with the lever (7) by click fitting.

6. Removable gripping device (1) according to one of claims 1 to 5, characterized in that the locking means (33) comprise a tab (25) in which an opening (23) is formed, said opening (23) being adapted to be engaged with a hook (22) of the lever (7) in the retracted position when the locking means (33) are in the locked position, and being adapted to be released from the hook (22) when the locking means (33) are in the active position.

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7. Removable gripping device (1) according to claim 6, characterized in that the hook (22) comprises an upper surface (24) adapted to entrain the locking means (33) from their active position towards a position enabling click fitting of the hook (22) in the opening (23), when the lever (7) is pivoted into its retracted position.

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8. Removable gripping device (1) according to one of claims 1 to 7, characterized in that the activation button (20) projects from a surface of the removable gripping body (2) opposite the surface on which the lever (7) is fixed.

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9. Removable gripping device (1) according to claims 6 and 8, characterized in that the mobile member forming a gripper (4) has a groove (21) through which the activation button (20) is solidarized to the tab (25).

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10. Removable gripping device (1) according to one of claims 1 to 9, characterized in that the means (33) of locking in the active position are adapted to make the

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lever (7) move from its retracted position to its extended position.

11. Removable gripping device (1) according to claim 10,
5 characterized in that the locking means (33) comprise an element forming an inclined plane (18) adapted firstly to stop in contact with a bearing surface (19) of the lever (7) when the locking means (33) are in the active position, and secondly to impose a pivoting movement on the lever
10 (7), to move it from the retracted position to a position in which the lever (7) is moved to its extended position by the transmission means (9) alone.

12. Removable gripping device (1) according to claim 11,
15 characterized in that the hook (22) is adapted to be released from the opening (23) by translation of the locking means (33) towards its active position before the inclined plane (18) stops in contact with the bearing surface (19).

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13. Removable gripping device (1) according to one of claims 1 to 12, characterized in that the displacement means (6) are adapted to adjust the distance separating the two members forming the gripper (3, 4) in the closed
25 position, to match the thickness of the gripped container.

14. Removable gripping device (1) according to claim 13, characterized in that a spring (15) adapted to act on the mobile member (4) so as to enable adjustment of the

distance separating the two members forming the gripper (3, 4) is housed in the transmission means (9).

15 15. Removable gripping device (1) according to one of claims 1 to 14, characterized in that the transmission means (9) are formed by a connecting rod (9) free to rotate with respect to the lever (7) and to the mobile member forming the gripper (4).

10 16. Removable gripping device (1) according to claim 15, characterized in that the connecting rod (9) is free to move in rotation with respect to the lever (7), under the control of a shaft (13) that is located close to the end of the lever (7) opposite the end at which the lever (7) is
15 hinged to the gripping body (2).

17. Removable gripping device (1) according to one of claims 1 to 16, characterized in that the length of the lever (7) corresponds to the width of three fingers in
20 contact with each other.

18. Removable gripping device (1) according to one of claims 1 to 17, characterized in that the lengths of the lever (7) and the gripping body (2) are such that a user
25 holding the gripping device (1) in his or her hand will have his or her index finger and middle finger in contact with the lever (7), and the ring finger and little finger in contact with the gripping body (2).